

Message Text

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ORIGIN ERDA-07

INFO OCT-01 EA-09 ISO-00 OES-07 SS-15 ACDA-10 PM-04
COME-00 CIAE-00 INR-07 NSAE-00 SP-02 L-03 NRC-07
EB-07 /079 R

DRAFTED BY USERDA:RDD:DGUBERNICK:JK:AN
APPROVED BY OES/NET:D HOYLE
USERDA:AIA: G HELFRICH
T: L SCHEINMAN
ACDA: L GALLINI
PM/NPP: J MCGUINNESS
EA/J: S ECTON

-----141852Z 004602 /41
P 132049Z MAY 77
FM SECSTATE WASHDC
TO AMEMBASSY TOKYO PRIORITY

UNCLAS STATE 109310

PASS TO HENOC

E.O. 11652: N/A

TAGS:TAGS

SUBJECT: SOLICITATION OF JAPANESE INTEREST IN U.S. LARGE
EM PUMP DEVELOPMENT PROGRAM

1. IN 1973, ERDA INITIATED DEVELOPMENT WORK AT GENERAL
ELECTRIC COMPANY - FAST BREEDER REACTOR DEPARTMENT (GE-
FBRD) ON A LARGE SCALE EM PUMP CONCEPT FOR POSSIBLE AP-
PLICATION IN THE MAIN FLOW LOOP OF AN LMFBR. THIS PROGRAM
CONSISTED OF DESIGN, FABRICATION AND SODIUM TESTING OF A
14,500 GPM, 500 FT. HEAD PUMP USING THE SAME BASIC RE-
QUIREMENTS ESTABLISHED FOR THE FFTF PRIMARY SYSTEM MECH-
ANICAL PUMPS. THE CONCEPT SELECTED FOR DEVELOPMENT WAS AN
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AC QUOTE ANNULAR LINEAR INDUCTION PUMP END QUOTE WITH A
QUOTE CENTER RETURN END QUOTE DISCHARGE (ALIP-CR). THIS
CONCEPT WAS BELIEVED TO OFFER A NUMBER OF ADVANTAGES FROM
THE STANDPOINT OF ACCEPTANCE BY THE ASME CODE, COMPACT-
NESS, AND EASE OF MAINTENANCE. ERDA HAS RECOGNIZED THE
POTENTIAL FOR LOWER PUMP COSTS AND HIGHER RELIABILITY OF
AN EM PUMP SYSTEM (VERSUS A MECHANICAL PUMP SYSTEM) AND

AS SUCH HAS BEEN PURSUING THIS OPTION THROUGH R AND D EFFORTS AND FULL-SCALE PROTOTYPE SODIUM TEST PROGRAMS. HOWEVER, DUE TO RECENT BUDGET CONSTRAINTS AND LMFBR PROGRAM REEVALUATION,

ERDA FINDS IT NECESSARY TO CLOSE-OUT WORK ON THIS PROGRAM WITHOUT THE FULL REALIZATION OF ALL THE BENEFITS OF AN EM PUMP SYSTEM. THIS IS EXTREMELY UNFORTUNATE IN THAT THE DESIGN IS COMPLETE AND FABRICATION OF THE PUMP AND CONTROL SYSTEM ARE WELL UNDERWAY WITH ALL FINISHED SUBASSEMBLIES SCHEDULED FOR DELIVERY BY THE FIRST QUARTER OF FY-78 FOR FIELD ASSEMBLY, INSTALLATION, AND INITIATION OF TESTING.

2. WITH THE MAJOR PORTION OF FUNDS ON THIS PROGRAM ALREADY EXPENDED, ERDA WOULD LIKE TO DETERMINE THE EXTENT TO WHICH A FOREIGN INTEREST (JAPAN, PNC) MIGHT BE WILLING TO PARTICIPATE IN THE PROGRAM IN EXCHANGE FOR THE LARGE EM PUMP TECHNOLOGY. IN THIS REGARD, WE WOULD APPRECIATE YOUR EFFORTS IN DETERMINING WHAT THE JAPANESE INTEREST MIGHT BE. WE UNDERSTAND THAT GE-FBRD THROUGH THEIR OFFICE IN TOKYO (MR. MIYAMOTO) HAS ALREADY DETERMINED THAT PNC MAY HAVE AN INTEREST IN SUCH AN ARRANGEMENT. THE WORK WHICH REMAINS TO BE COMPLETED ON THE EM PUMP INCLUDES INSTALLATION OF INSTRUMENTATION FOR THE PUMP DUCT SUB-ASSEMBLY, HYDROSTATIC AND HELIUM LEAK CHECK, FIELD ASSEMBLY, INSTALLATION IN A SODIUM LOOP, AND SODIUM TESTING. ERDA IS THEREFORE INTERESTED IN SOLICITING PNC INTEREST IN CONTINUING AND COMPLETING THE EM PUMP PROGRAM. IT WOULD BE EXPECTED THAT THE U.S. WOULD SUPPLY DESIGN UNCLASSIFIED

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DATA AND THE PUMP HARDWARE COMPLETED TO DATE. PNC WOULD COMPLETE THE INSTALLATION OF INSTRUMENTATION, HYDROSTATIC AND HELIUM LEAK CHECK, PROCUREMENT OF THE REMAINING PUMP HARDWARE, PUMP ASSEMBLY, SODIUM TESTING, REPORT THE DETAIL TEST DATA TO THE U.S., AND RETURN THE PUMP HARDWARE TO THE U.S. FOR POST-TEST EXAMINATION.

3. IN THIS REGARD, WE WOULD APPRECIATE YOUR ATTEMPTS TO PROVIDE PNC WITH THIS INFORMATION AND IF A SERIOUS INTEREST IS ESTABLISHED WE WOULD BE PLEASED TO PROVIDE (VIA A MEETING, IF NEEDED) MORE DETAILED TECHNICAL INFORMATION WITH REGARD TO PUMP DESIGN, EXPECTED OPERATION, OR OTHER INFORMATION OF CONCERN TO PNC. SPECIFIC AREAS OF INTEREST TO ERDA INCLUDE LOCATION, AVAILABILITY (PROBABLE SCHEDULE) AND CAPABILITY OF THE SODIUM FACILITY(S), THE SPECIFIC ORGANIZATIONS TO BE INVOLVED, AND ANY OTHER CONDITIONS WHICH THE JAPANESE MAY REQUIRE.

4. IN CONCLUSION, YOUR PROMPT EVALUATION OF THE WILLING-

NESS OF PNC TO ENTER INTO AN AGREEMENT WITH ERDA FOR THE REMAINING PORTIONS OF THE EM PUMP PROGRAM IN RETURN FOR THE TEST DATA WOULD BE GREATLY APPRECIATED.

5. WE ARE AWARE THAT IN MAKING THIS PROPOSAL SOME JAPANESE OFFICIALS MAY VIEW IT AS INDICATION U.S. IS CONTINUING TO ENCOURAGE LMFBR DEVELOPMENT USING PLUTONIUM CYCLE. HOWEVER, WE ARE MAKING THIS PROPOSAL AT PRESENT TIME SINCE (A) EM PUMP PROGRAM IS RELEVANT TO ALL LMFBR CYCLES USING SODIUM COOLANT AND (B) IN ANTICIPATION OF CONTINUING COOPERATION WITH JAPAN ON LMFBR DEVELOPMENT UNDER IFCEP, INCLUDING ALTERNATIVE FUEL CYCLES WHICH REDUCE ACCESS TO WEAPONS-USABLE MATERIAL. IN PRESENTING PROPOSAL YOU SHOULD EMPHASIZE THIS POINT TO APPROPRIATE OFFICIALS, AND ALSO INDICATE THAT THE DIRECTION OF OUR COOPERATIVE PROGRAMS WITH ALL COUNTRIES IN THIS AREA WILL REFLECT THE REORIENTATION OF OUR DOMESTIC RESEARCH EFFORTS

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AWAY FROM PLUTONIUM BREEDER REACTORS.

6. PLEASE CONTACT ERDA IF THERE ARE ANY QUESTIONS. CHRISTOPHER

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Message Attributes

Automatic Decaptioning: X
Capture Date: 01-Jan-1994 12:00:00 am
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: BURDENSARING, NUCLEAR REACTORS, PUMPS, PROGRAMS (PROJECTS)
Control Number: n/a
Copy: SINGLE
Sent Date: 13-May-1977 12:00:00 am
Decaption Date: 01-Jan-1960 12:00:00 am
Decaption Note:
Disposition Action: n/a
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment:
Disposition Date: 01-Jan-1960 12:00:00 am
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1977STATE109310
Document Source: CORE
Document Unique ID: 00
Drafter: RDD:DGUBERNICK:JK:AN
Enclosure: n/a
Executive Order: N/A
Errors: N/A
Expiration:
Film Number: D770171-0867
Format: TEL
From: STATE
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1977/newtext/t19770559/aaaabyzb.tel
Line Count: 142
Litigation Code IDs:
Litigation Codes:
Litigation History:
Locator: TEXT ON-LINE, ON MICROFILM
Message ID: fd9aa494-c288-dd11-92da-001cc4696bcc
Office: ORIGIN ERDA
Original Classification: UNCLASSIFIED
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Original Previous Classification: n/a
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Retention: 0
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Review Date: 14-Jan-2005 12:00:00 am
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Review Exemptions: n/a
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Review Release Date: n/a
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Subject: SOLICITATION OF JAPANESE INTEREST IN U.S. LARGE EM PUMP DEVELOPMENT PROGRAM
TAGS: TECH, JA
To: TOKYO
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vdkgvwkey: odb://SAS/SAS.dbo.SAS_Docs/fd9aa494-c288-dd11-92da-001cc4696bcc
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